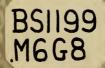
HENRY D. GREGORY

A
LAYMAN'S LOOK
AT
FOUR MIRACLES





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BY

HENRY D. GREGORY,

LATE VICE-PRESIDENT OF THE GIRARD COLLEGE FOR ORPHANS,
PHILADELPHIA.

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A LAYMAN'S LOOK

AT

FOUR MIRACLES

A TEACHER in studying the Bible, sometimes for his own satisfaction, sometimes that he might explain it to his pupils, has been led to look upon some passages in lights which, though not common, have appeared to him to be both sound and helpful. Especially has this been the case in regard to several of the miracles. He seems to have gained a better understanding of the particular miracles considered; and at the same time, to receive more readily as true, those miracles which he does not understand. He submits these views in the hope that the points taken may, in the judgment of some readers, be esteemed sound, and may prove to them such a means of comfort as they have been to himself.

It may perhaps save repetition to premise a few words on miracles in general. And, first, a miracle may be defined as an occurrence which is wonderful in such a manner, that we cannot but regard it as of superhuman origin. It will be noticed that no reference is made to its relation to the Laws of Nature. The Laws of Nature may be looked upon as the totality of the ordinances to which God has subjected His Creation; and these must be regarded as perfect and unchangeable; but it is only in the infinite

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knowledge of God, that the Laws of Nature are thus found. With our limited intelligence, we receive them by degrees: at any given time, our knowledge of them is imperfect, and we may be ignorant of many laws, we may esteem as laws some things which are not at all such.

Now, it is not to be overlooked, that if we use the phrase, the Laws of Nature in the definition of a miracle, of necessity the phrase carries with it the idea, "as understood by man." But these laws have at different times been understood very differently, and the changes of opinion in regard to them have been many and great. The opinions now held as to the shape of the earth; the arrangement of the parts of the solar system, and their motions; the law of gravitation; the circulation of the blood; the character of the imponderables (viz., heat, light, and electricity), whether they are material substances or vibrations; the origin of many rocks, whether igneous or sedimentary; in chemistry, the views of the alchemists, the phlogistic and antiphlogistic theories, and the new chemistry, are all due to comparatively modern times. On these and many other subjects, our predecessors sometimes were without a law; oftener held laws quite different from those now prevailing. Their confidence in their views was probably as great as ours. Unless we are more fortunate than they, we must expect our views to be revised, modified, perhaps rejected, by the generations to come. To make the reality of a miracle dependent upon its relation to our understanding of the Laws of Nature, would be to obstruct all assurance that a communication came from Him that is above us, would be to shut out God from our senses and thought, and that, upon the authority of man,—an inversion of the order of supremacy and dependence out of all reason.

Secondly, it may further be observed, that it is no disparagement of the miraculous character of an occurrence, if natural causes intervene in its production. It may, for all that, be "wonderful in such a manner that we cannot but esteem it of superhuman origin." For an example: when (Ex. xvii. 6) Moses smote the rock in Horeb, who can be sure that any violation of the chain of natural causes and effects took place? A crevice in the rock, conveying water, may have been opened by the blow that was struck. But who could assure him that water would follow the stroke? Only God. That answer to faith and obedience was miraculous.

Indeed in some instances, the use of second causes is distinctly stated. In Ex. xiv. 21 we read, "The Lord caused the sea to go back by a strong east wind all that night, and made the sea dry land, and the waters were divided." The passage of the Red Sea was natural enough; but by no means removed by this from God's control, and the discernment of this control, exercised for their deliverance, constituted it a miracle.

Is Moses to be assured that the voice which addresses him in the wilderness is indeed that of the Almighty; is the boat's crew upon the Sea of Galilee, trembling and ready to perish, to know that the voice which rebukes the wind and the sea, speaks with the authority of the Creator; are the many thousands of Israel at Sinai to feel that they are in the presence of the great Maker of All, in whose hands their life and breath are; no whit of the demonstration shall be lacking: It is God who descends, who summons, who commands: every intelli-

gent being present is a witness, competent and confident. Nor, if God employs a creature that He has made, an agency that He has appointed, a law that He has established, does He thereby make it less real, that it is He who acts; or make it less our bounden duty to obey Him. The children of Israel were stubbornly set to do evil, to worship the impure idols of the heathen. Day by day, for three years and six months, were a brazen sky, a land of drought, a starving people, fulfilling the word of the prophet of the Lord; yet that fire from heaven which consumed the victims, the stones of the altar, and the abundant water of the trench, was no more the work of the Almighty than the long preceding drought.

In the drought He revealed the means to human sight; in the blazing sacrifice He concealed them. Alike the deeds were His.

Thirdly, though the proverb, "Possession is nine points of the law," is oftenest quoted with the thought of unjust possession; yet it has much wider scope in the sphere of rightful ownership. It is in virtue of the truth underlying this proverb that we labor and save, invest and rest, not fearing to be deprived of the acquisitions of our sires, or of the fruits of our own industry.

The same holds good in the realm of thought. The wide spread of an opinion in regard to matters of fact, occurrences of which one can be assured by his senses, give to the opinion the probability of a real foundation in the actual occurrence of the facts. The reception of such an opinion during many centuries by the descendants of those originally present, and a history punctuated with circumstances naturally resulting from the facts,

place the burden of proof upon all who would make objection.

The scriptural account of the miracles is in this position. We do right, therefore, in reading to assume their truth. They enter into our acquaintance as one reliably introduced, or as an hereditary friend. If we do not understand how they are, we do well to rest in faith upon the record; but if we find corroborative testimony in various directions, and especially when we find natural law cooperating in their production, all the more do we with reverence admire His infinite wisdom unto whom are "known all His works from the beginning of the world." The miracles to be noticed are the swallowing of Jonah, and his restoration; the fall of the walls of Jericho; the sun's delay at Joshua's command; the universal deluge.

It may be well to look first at the account given of the swallowing of Jonah by the whale. For of all the miracles recorded, not one has been more the object of ridicule; while the grounds for impugning the truth of the Scripture account are of the flimsiest character. What has been alleged against it?

I. It is said to have taken place in the eastern end of the Mediterranean Sea, and that there are no whales in that sea. If this were now true, it would prove nothing as to the occupants of that sea in Jonah's day, eight hundred years before Christ. It is natural to suppose that the great increase in navigation, and still more the acquisition of knowledge by which ships would cross the sea, instead of creeping along the shores, would increase "the fear and dread" of man among the inhabitants of the deep; and so, as has been the case with more than

one class of animals, we should not be surprised at a difference between now and then. 'But the assertion is not true. Of the cachalot, or sperm whale, the Library of Universal Knowledge, or Chambers's Encyclopædia, under the article Cacholot, says it is "not of frequent occurrence on the European shores, although it sometimes enters the Mediterranean, and is occasionally stranded on the coast of Britain." The Century Dictionary says, "Its chase is important in the warmer waters of all seas."

- 2. But it is said a whale cannot swallow a mackerel. much less a man. If we speak of the Greenland or right whale, or any of the baleen whales, which instead of teeth are provided with strainers of fringed whalebone, it is true that the throats of these and their food are small. But we are not to hunt up a whale which cannot swallow a man, that we may substitute it for that which God sent to receive Jonah when cast into the sea. Of the sperm whale it is said in the Scripture Natural History, "This species feeds on lump fishes, dog fishes, cuttle fishes, and occasionally swallows the shark, which the width of its gullet enables it to do entire." The Library of Universal Knowledge tells us "the mouth is very large and wide; and the throat, unlike that of the Greenland whale, is very wide, sufficiently so to admit the body of a man."
- 3. We may be told that Jonah, if swallowed, would only be smothered instead of being drowned. To be sure, if we conceive of him as engulfed in the animal's paunch, the gaseous products of that region might appear either deadly in character, or insufficient in quantity. Yet Beale, in his Natural History of the Sperm Whale, after stating that he has four stomachs,

adds, "I think it must be allowed that the first stomach must be a reservoir."

But is there any need of this? Is there not better accommodation awaiting him in the air-passages of the animal? For it is well known that the whales are mammals, warm-blooded animals. Instead of drawing in water, and separating from it a scanty supply of air by gills, it has lungs and breathes air, and so must at moderate intervals raise its head partly above water. The blowing, sometimes called spouting, is not of water, but the rejection of the air vitiated by its breathing, and visible like our breath upon a frosty morning, by the quantity of vapor that is condensed as it issues. Some spray may be seen when the whale has begun to blow while the orifice was not yet above the water. The sperm whale has but one. Air enough for Jonah to breathe would hardly be missed from the inbreathing of the gigantic cetacean.

It only remains to consider what room he will find there; and this may be roughly inferred by considering the amount of air necessary for an animal of such size, and consequently the magnitude of the passage which conveys air to the lungs, the windpipe. In February, 1819, a cachalot was captured in Whitstable Bay, England, which was sixty-three feet long. Its heart was three feet across, and the aorta, or main artery, was a foot and three inches in diameter. What a supply of air must be used to vitalize such a stream of blood, what passages to convey it to the lungs, and to remove it! To compare his consumption upon even terms with ours, taking man at five feet eight inches, and his aorta at three-quarters of an inch, a whale sixty feet long would

need a windpipe twenty-five inches in diameter; but if the comparison be made with one of eighty feet in length, and such are found, we must expect a windpipe of thirty-nine inches. It is not then extravagant to look for a diameter of three feet in the windpipe, and there is room enough for the passenger. As to his comfort, the whale, with such a crumb started in the wrong way, would be far worse off than Jonah. And for that reason he would cough his tenant up as soon as possible, who, since the sea had ceased from its raging, would strike out for the shore. Can we imagine when the ship made the nearest port, some other passenger, to have landed, and found his way to Nineveh, and told the strange story up to the casting of Jonah overboard, and on Jonah's subsequent arrival recognized him as the man?

We have then the wonderful occurrence that the Maker of all punished His disobedient servant without the violation of any of His laws; yet it was a most surprising miracle, and one which an acute mind may readily receive as probably contributing to the final reception of Jonah's message by the inhabitants of Nineveh.

The fall of the wall of Jericho, recorded in the sixth chapter of Joshua, is the second miracle proposed for consideration.

The walls of cities in those ancient days were formidable affairs. The scouts are mentioned as reporting the cities of Canaan as "great, and walled up to heaven." (Deut. i. 28.) The heathen dwellers in Jerusalem thought themselves in safety, though only "the lame and the

blind" should be left to defend them. The Ten Thousand, Xenophon tells us, passed in their Retreat, at Larissa, a wall one hundred feet high and twenty-five feet in thickness; and at Mespila, one that was higher by fifty feet. Jericho was probably the second city in the land of Canaan, and fortified accordingly; yet its bulwarks were in vain.

No battering-ram was moved against them, no bank of earth was reared, nor engines of war constructed; but it fell without a blow. Day after day did the host of Israel march around the doomed city, perhaps a laughing-stock to those who, for defence or from curiosity, were upon the wall. Midway of the column were the priests bearing the ark of the covenant, and blowing trumpets of rams' horns. Six days was this done, once each day; but upon the seventh, they started earlier, and "compassed the city seven times." At the signal which had been announced, "a long blast with the ram's horn," all raised a mighty shout; and as the wall fell flat, every man marched directly before him into the city thus left without a wall, and almost without a defender, for the tumbling ruins would have killed the most of them.

Without any light on the subject, well might one declare it "an immediate interposition of miraculous power." Bearing in mind that "immediate" means without any intervention of second causes between God's will and the accomplishment of the fact, let us study a little the situation of the place, and the method which the army, all unknowing, under the direction of God, All-Wise, pursued.

It is well known, that in crossing a bridge, an army

must drop the marching step: otherwise it may break down the bridge. The sources of danger are, first, the mere weight of so many men; secondly, the addition of the shock of the step, which, though trifling for one man, comes to a very important amount when it is the step of thousands; but last, we have to reckon with a danger that is much greater, because it is increased at every step. According to its length, its structure (including the strength and elasticity of the materials), and the tension, or strain, upon it, there is a certain interval of time in which the bridge passes through three motions: it yields to the downward impulse; it recoils, going now above its original position; and goes downward again, though not so far as at the first descent.

If now, there follow other steps, at uniform intervals of time, regulated it may be by music; then, in case the bridge vibrates, and the steps succeed each other in equal time with the vibrations, at each downward motion a new shock, equal to the first, adds its effect to the motion which has already accrued. Thus, the swing (amplitude they call it) grows constantly greater and more powerful, and the fall of the bridge draws nearer. Some may find it easier to trace the increasing force of vibrations in the case of a long board swinging between two men who have happened to get their step in just the time of the board's vibration; or in the "working up" of a common swing.

Jericho was situated in a fertile plain, the same that attracted Lot's cupidity (Gen. xiii. 11), doubtless under ordinary circumstances stable enough. But we know that the earth can receive vibrations, when jarred; so, too, can the air or a wall. In short, it is much easier to extend than to limit the list of things that vibrate. Under

the command of God, the plain of Jericho was subjected to the rhythmical tramp of six hundred thousand fighting men. It could not but vibrate, and that with increase of response, as daily it was solicited by the same steadfast persuasion. We look with interest at the effect of a great steam-hammer; but that is a trifle to the force that is shaking the plain of Jericho, and the waves of which draw daily nearer to the wall. That wall itself will vibrate; and with a tension increased by the people upon it: but who, save the infinitely wise Jehovah, knows its coincidence with the rhythm of the march, and of the shout which followed that long, loud blast which bade the army close?

The result teaches even the most untutored. The Laws of Nature suffered no violence: they fulfilled the will of their Author, the God of Nature. Yet was it a most astounding miracle which thus began the conquest of Palestine.

In taking up the halting of the sun and moon at the command of Joshua, the next miracle that comes to be considered, we seem to meet with a plain breach of natural law; for what could be more contradictory to the course of nature, than for the sun to cease his daily course, or, what is the same thing, for the earth to stop in its daily rotation? For it has been assumed that the Bible says that the sun stood still for a whole day. It may be well, first of all, to see exactly what words are used to tell how long the halting continued. It is all in Joshua, tenth chapter, and thirteenth verse, where the first expression is "until the people had avenged themselves upon their enemies." As this gives us no definite

length of time, we pass on to the second expression "and hasted not to go down about a whole day." Now this looks at first as if "about a whole day" denoted how long the space of time was, during which the sun hasted not to go down. Certainly, if it had read "during a whole day," or "for about a whole day," then those phrases would have shown how long; but we have neither of these. The word "about" will not of itself determine whether time how long is meant, or time when. "The men worked about a day:" undoubtedly here we have duration, but it is not the "about" that makes it so. "They departed about sunset:" as surely, here we have time when; but neither does the "about" make that. It only tells us that "a day" is not to be taken as a minutely accurate account of the duration in the one case, nor "sunset" in the other as precisely the moment when they left for home.

This being the case, what certainty we can attain in regard to the prolongation of the day intended by the writer, must be drawn from the probable time of avenging themselves upon their enemies.

"Our men having the chase and execution of them near eight miles." So wrote Oliver Cromwell of what his army did after the enemy was routed in the battle of Dunbar. Joshua had accomplished a forced march, and after a rest, possibly a very short one, had fought the great battle of Gibeon. How many hours will he urge his wearied men to the execution of vengeance upon the foe? Include the circumstance that the hail-storm slew more than the Israelites. Would not three hours be a fair presumption, and five hours a very large one? So long let us reckon the sun's delay, apparent delay. It is

then entirely possible, as the account stands in the English, to suppose the period during which the sun stood to be much less than twenty-four hours. Before making inquiry what prolongation of the day may be compatible with the facts taught by astronomy, let us compare the testimony of the Hebrew original with that of the English version. Corresponding to our word "about," we there find the inseparable preposition 2. This, which never stands alone, is here in combination with ילמ, day, and followed by המים, whole or complete. This inseparable, besides the meaning of "such" and "so," is also used, as Gesenius informs us, indefinitely, as equivalent to "in some way, about, with numbers of measures of space and time, and to indicate a point of time not exactly defined." This last is just the use of the English word "about," and is found in Exodus xi. 4, about midnight; Exodus ix. 18, to-morrow about this time; Daniel ix. 21, about the time of the evening oblation. "In all these examples 3 may be translated adverbially, as is here done, and the substantive is then in the accusative of the time when." But it could also obviously have been translated "at," for Gesenius goes on to speak of as a preposition, and under the third head remarks, "From the adverbial use comes the use of this particle as a preposition of time or space, like German um = English about, at; as, Um drei Uhr, which means not only about three o'clock, but at three o'clock." The examples of this are numerous. Nordheimer's Hebrew Grammar is to the same effect.

So that we are fully justified in translating "So the sun stood still in the midst of heaven, and hasted not to go down at a complete day." That is, when an hour-glass, or a chronometer, if they had had such a thing, indicated the time of sunset, the sun appeared to be distinctly behind time.

In the Septuagint, it reads ob προεπορεύετο εὶς δυσμὰς εἰς τέλος ἡμέρας μιᾶς, where εἰς corresponds to the Hebrew \beth . Although, doubtless as a result of the greater copiousness of the Greek language, the use of εἰς in the meaning of "at" is far less common than in the corresponding Hebrew preposition, it nevertheless does occur. Witness Acts xiii. 42, εἰς τὸ μεταξὸ σάββατον, on the next Sabbath; Phil. ii. 16, εἰς ἡμέραν Χριστοῦ, at the day of Christ; Aristoph, εἰς ἑσπέραν, at evening.

We have then full right to say, after a careful examination of the record, and of the accordant opinions of grammarians as to the use of the particles in Greek and Hebrew, that we are under no necessity of considering the clause "about a whole day" as referring to the duration of the day, but that it may just as properly denote the time when the event took place, the point of time when, the day being complete, the sun, that should as usual sink below the horizon, instead of so doing, "stood still and hasted not to go down."

Obviously, this being the case, we should follow the course by which in our daily reading, and our daily speech, we determine similar cases. The context, the attendant circumstances will require one or the other of these meanings as alone consistent with them.

What then are those circumstances?

After the passage of the Jordan, the children of Israel encamped at Gilgal, and remained there during the siege of Jericho, the repulse at Ai, the capture of that place, and subsequently. While many tribes of the land were

gathering to confront them, the people of Gideon, an important city, seeing no hope of safety in force, used craft with success. The Israelites made a league with them, and when the fraud came to light, they reduced the Gibeonites to servitude, but spared their lives, and regarded it a duty to extend to them protection in case of need.

Adoni-Bezek, king of Jerusalem, had at the time of our narrative united four other chiefs with himself, and was laying siege to Gibeon to punish the inhabitants for their defection. Too weak to defend themselves, they sent messengers to Joshua to ask of him speedy relief. Starting probably by night, and travelling with a diligence stimulated by the danger of their homes, they would reach Gilgal fairly early in the morning. Joshua hastens to defend the subjects of Israel; but mobile as his forces were, he could not set out under several hours. For consider, that he had to learn what the messengers could tell him of the forces and position of the enemy, and of the roads, to form an approximate plan of the campaign, to appoint what force he would leave to mask Jerusalem, to issue his orders to the heads of tribes, and have the men take what rest was possible, in anticipation of the long march of twenty-six miles to be made, much of it by night. In all likelihood he in this time carried the matter to God, and received the assurance of success mentioned in verse eighth.

If we may assume that the force was in motion by five in the afternoon, and that their net progress was two and a half miles per hour, they would be drawing near to Gibeon by three in the morning. One has said that a way should always be left for the enemy to retreat, but it is only sometimes best. In Joshua's case his opponents had all come up from the south and southeast, the hill country. As it was highly important to keep them, if beaten, from re-entering their walled towns, he would send a strong detachment by and beyond the south side of Gibeon. It seems not unlikely that after short conference with such authorities from the city as could come out to meet them, an attack soon after daybreak completely surprised the Canaanites.

One might do a great deal of guessing about the battle, and be little the wiser. Like most engagements, it would furnish two periods. In the former, a stubborn resistance made the issue still, humanly speaking, doubtful. The fight appears to have been long maintained, so that the heathen suffered "great slaughter" at Gibeon. After being overcome and broken in the retreat northward, the narrow and precipitous nature of part of the road to the Upper Beth-Horon, giving even small groups opportunities to resist, contributed to delay the advance of the victors. The distance is about ten miles, so that it may have been well on in the day when, the crest being reached, the routed foe was seen in full flight down the slope.

Probably somewhere here it was that Joshua (was not the impulse from God?) called upon the sun and moon in the words so often quoted. As he saw the decline of day threatening to deprive the Israelites of much of that harvest of death which was looked to as the first fruits of victory, he spoke, and the Lord answered in the deed. "Whatsoever the Lord pleased that did he in heaven and in earth, in the seas and all deep places," Psalm cxxxv. 6. Was it necessary that He should break His laws in

order to obtain His pleasure? Let us see. The sun appeared to remain, or to go but slowly down the west. When the day was complete, according to all other ordinary tokens of the passage of time, this one was lacking, for the sun "hasted not to go down." Could this be? How could it be? How long could it be?

"The heavens declare the glory of God; and the firmament showeth his handywork" is not only true of the daily and nightly panorama above us; and of the rarer but equally regular recurrence of eclipses, transits, occultations; but also of those which, while rare, have their times of appearance beyond our powers of calculation. Among them are halos, and parhelia and paraselenæ (mock suns and mock moons), very striking phenomena.

In the halo, circles of light, sometimes of the prismatic colors, sometimes white, surround the sun. The commonest is the single circle about the sun as centre at a distance of twenty-two degrees. Concentric with this is seen, but not so frequently, a circle with a radius of forty-five degrees. With these are other circles, tangent to them, or cutting them, and at the points where either of these takes place, the light is stronger, thus forming parhelia (mock-suns), as also at points on the circumference vertically above or below the sun. Before sunrise and after sunset, the intervention of the horizon does not interfere with the part of the display above the sun. Though one at Hartford, Connecticut, in 1844, lasted from 10 A.M. to 2 P.M., they yet seem to be more frequent near the beginning and end of the day; as also in the Arctic regions. Scheiner in 1630 reports one as lasting five hours.

It has been found with a good degree of certainty that

the source of these phenomena is in the refraction of light by crystals of ice floating in the air. It is apparent, that when the ice crystals were but few, there would be but a faint halo, or parhelion, as the case might be. Between such a state, and one where the density of the cloud would not allow the passage of the light refracted, lies a point where the most light is refracted and able to pass through. This parhelion is recorded as "sometimes dazzlingly bright" (Cent. Dict.), and it is said, "being of itself a source of light, sometimes very intense, may have its surrounding halos,—called secondary" (Lib. Univ. Knowl., vol. vii., p. 255). Plainly such light could replace the sun, being indeed sunlight at second hand.

If, then, we conceive such a parhelion to have formed some time before sunset, the sun itself being concealed by a cloud from this time till what would have been its setting, it might last long after sunset, and even give some semblance of twilight for a time after its direct light was cut off. For the parhelion, the representative sun, would be 47° behind the original source of its light, and be over three hours later in setting. Less than that would justify the language of the record; but that, or a little more, is the sequence possible under the operation of natural law.

Some one may say, but there must have been a strange state of the atmosphere to bring this about. Very true, very true, and we have the hail-storm of that day as a guarantee that it was so. Such hail-storms are so rare, that earthquakes are comparatively frequent, but they do occur nevertheless. Here we see no natural law broken, though none but God could have known what Joshua would ask, nor any but God have arranged to fulfil his request.

And therefore it was a miracle, and also, natural law does not contravene, but confirms, the record of the Bible.

In proceeding to consider the subject of the Deluge we may well be moved with great self-distrust and hesitation, as we look at the astounding character of the event. What at first appears to be the plain meaning of the record is, that no portion of the globe remained uncovered by water; and that not only all mankind, but all land animals, with the exception of the occupants of Noah's ark, were destroyed. The frequent occurrence of sea-shells and other marine fossils at great elevations, combined with a world-wide tradition to give ready acceptance to this understanding of the Bible statement.

Let us begin by ourselves giving to this view the benefit of possession. With the cashier in dealing with bankbills, let us "make much of our first impressions," and see if there is nothing to be found in nature to give countenance to it. Time enough to seek other versions, when this proves untenable.

Let us ask, How could such a flood be produced? The question is not whether God is able to do it; but whether, as He sometimes uses means in working miracles, we can discern in His creation any means capable of effecting such a result.

Reflection gives us great reason against bringing waters of which we have no knowledge from a submarine chasm equally unknown, and still more against the view of that sage who imagined the atmosphere turned into water. When the Almighty "divided the waters which were under the firmament from the waters which

were above the firmament," He gathered the former "together unto one place," and "called it Seas." This being much greater in amount, as well as the source whence the moisture of the air is renewed, is the water that we have to do with. These oceans partake of the earth's rotation, about a thousand miles per hour at the equator, diminishing to nothing at the poles; and in consequence of this rotation, the earth is protuberant at the equator, the surface being there thirteen miles farther from the centre than it is at the poles. Should the rotation slacken or cease entirely, two results would follow: the water would for a time retain its previous motion, and come with force upon the land east of it, and the bulge at the equator would cease, the water passing north and south, until it should be of equal height from pole to pole, measuring from the centre.

There is no record, nor any physical indication of such a stoppage, though to conceive it may be of use in helping us to grasp the more complicated movements of which we may be able to adduce some evidence. Let us think of the axis of the earth as having been different before the flood, so that the obliquity of the ecliptic should be say ten degrees instead of 23° 28'. Then a change to the present axis would change the size and position of the tropics and polar circles, the seasons both in duration and intensity, and the length of day and night. gard to the shape, it would, after a period of transition, be found of the same spheroidal shape as before; only the poles will be at points thirteen degrees and twentyeight minutes distant from the antediluvian poles, and the equator will intersect the old equator at two points, crossing it obliquely, and reaching midway of the intersections the distance of 13° 28′. In that period of transition, the catastrophe of which we are speaking took place, and it may be more easily apprehended by introducing here the other factor in the result, the CAUSE of the changed position of the axis.

Plato in his dialogue called "Timæus" gives an account of Atlantis, a very large island situated to the west of the Straits of Gibraltar. It had been told to Solon while travelling in Egypt by a courteous priest of Neith, or Minerva, at Sais, a principal city of the Delta. According to him, this island was as large as Asia Minor and Libya taken together, which might be as much as three hundred thousand square miles or more. It was governed by a monarch, was fertile; its people, virtuous, and prosperous; but later, changed for the worse, became arrogant and aggressive, and conquered largely both in Europe and Africa. After its career of conquest was checked, the Gods for its impiety, with earthquake and a deluge in one day and night, sank it entirely beneath the sea.

Let us make ourselves spectators of this scene, and ask how will the submergence of this large island affect this earth and its motions? Much of the region of the ocean named from this ill-fated island is over two thousand fathoms, or two miles and over, in depth.* Into the vast depression thus formed, waters from the surrounding parts would rush. It may have been a day, it may have been very likely the forty days before it ceased its downward course. The waters from the south would enter the chasm with a violent rush towards the east, and

^{*} See the maps in the "Voyage of the Challenger."

those from the north would tend to the west. The collision of vast streams of water at velocities rising to several miles in a minute would not, however, be the chief cause of the flood. A great amount of spray was blended with the rain, but nothing in that alone was equal to the production of the flood. But further, the quadrillions of tons of water that filled this gap were drawn, as the waters found their level, from the general ocean surface of the globe. Their weight being all added to the site of the late island, would throw the globe out of equipoise, it would be, so to speak, lop-sided, and would rotate by jerks with a wabbling and screw-like motion. As it gradually accommodated itself by changing its axis to suit the new distribution of the mass, the motions due to the changing condition disappeared and those alone remained that pertained to regular revolution upon the new axis. In the motions that transferred the general distribution of water from the old place and course to the new (overcoming the inertia which would have continued the old pace and direction) appears to be ABUNDANT CAUSE FOR A UNIVERSAL DELUGE.

It would be very rash, and headlong error to think of ascribing the entirety of fossils on high mountains to this event. We need have no doubt that many may have that origin; we have plenty of reason why a number should be differently assigned. There is a record which may well be thought to complete our links, and in mentioning a fact of which the writers almost certainly knew not the significance, may be set down as furnishing the testimony of the starry heavens to the theory of the deluge here maintained. In a note on page 268 of Rawlinson's "Historical Evidences," is given from Fa-

ber's "Horæ Mosaicæ" this Chinese tradition: "The pillars of heaven were broken—the earth shook to its foundations-THE HEAVENS SUNK LOWER TOWARD THE NORTH—the sun, the moon, and the stars changed their motions—the earth fell to pieces; and the waters enclosed within its bosom burst forth with violence and overflowed it. Man having rebelled against heaven. the system of the universe was totally disordered. The sun was eclipsed, the planets altered their course, and the grand harmony of Nature was disturbed." As the heavens were not changed; when they seemed lower, it was because the pole of the earth was higher than before. Neither of the gentlemen from whose learning and diligence this quotation comes, seems to have noticed the importance of the words which are here put into capitals. The phrase "the earth fell to pieces" may well also describe the breaking of strata and formation of faults as the land as well as the sea adjusted itself to the new curved surface. We may observe that the axis might have been changed, but the obliquity be the same as before, the last quotation and the next consideration favor or prove a change of obliquity as well.

It may be worth while also for our friends who know much about the animal creation, and those who are familiar with the glacial period, to consider whether the difference of climates and seasons, arising from a different position of the axis (the one suggested or some other) may not help to explain the different range of various animals then and now, and also to throw light upon the former great extent of the polar ice. A status which sent the sun's rays to Philadelphia at such an

angle of incidence as now belongs to the northern end of Newfoundland, has surely left intelligible marks.

Those who have been inclined to regard the flood as partial, may inquire where a depression can be found so surrounded as to prevent a place of refuge, and yet keep the waters from passing all barriers lower than the highest, or where a partial deluge could be located that would require *seven months* to drain off? This seems to be good reason for thinking that an efficient deluge cannot but be universal.

The want of room in the ark to accommodate the animals, depends, it is said, upon the number of species; but what is more uncertain than that? Hear the "Century Dictionary." "In the actual naming, characterizing, and classifying of species, naturalists differ widely, some reducing to one or two species, the same series of individuals which others describe as a dozen or twenty." And Chambers says, "In organic nature, it has usually been regarded as possessing a higher and more definite signification. But no term is more difficult to define. Many definitions have been proposed, but none wholly satisfactory, every attempt at definition involving —more or less—some disputed theory."

We find then, in regard to the deluge, that its universality would be a natural consequence of a change in the position of the axis of the earth; that Plato testifies to the sinking of the island Atlantis, and that would produce a change of axis; and that the Chinese record testifies to the change in the place and motion of the heavenly bodies which would result from the change of the axis. And we think it may be said that

there is no such consensus of proof for any other view of the deluge as for this; and this is also the tradition of almost the whole human race.

We have looked at four miracles, and in carefully regarding the presence of natural laws, the action of second causes, in the production of the divinely intended result, no idea is entertained that all miracles must be like them. In the course of time some may be added to the number of such; while of many we may still have no account to give but the pleasure and the immediate power of God. Concerning all in which we hitherto discern nothing intermediate, we have good right to exercise patience and faith, as we observe through what long periods of time the fact of a miracle may be known, and the part that natural law had therein not even suspected.

We have, too, the reliability of the records. When an ambassador from another nation approaches our government, he presents his credentials, the evidence of his rank and mission. Assured by these we receive him, and should by no means treat him at every turn as an object of suspicion. His word, his hand and seal, are proof of the correctness of his statements, and of the fidelity with which our sister nation will carry out what he undertakes in her name.

So a few miracles, a single miracle soundly proven, is the endorsement given by the Author of Creation to an appearance, a command, or a messenger. No multitude of occurrences which are not miracles can invalidate one real miracle. To allow it is to cast untruth upon God. Of miracles recorded as history, many were intended for effect on particular persons, or times long past. Discernment of their character was given to those to whom they were sent. The falling of the Holy Ghost upon all the persons assembled in the house of Cornelius, the centurion, was evidence that satisfied the Jewish Christians present, that these heathen should be taken as their brethren. The miracle of the great sheet seen by Peter at Joppa was personal, to direct him, contrary to all his prejudices, to become the guest of the Roman centurion. He was left in no doubt whence it came, and when all the steps by which he was led were by him related to the Christians at Jerusalem "they held their peace, and glorified God, saying, Then hath God also to the Gentiles granted repentance unto life."

Miracles and answers to prayer are near of kin. If we may become certain that we receive answers to our prayers, as some assure us has been their experience, we shall suffer nothing for lack of miracles. May increasing multitudes find it so.











